

Perceived Stress, Stress Coping Strategies, and Body Image Among Facial Dermatoses

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Key words: Facial dermatosis, Perceived stress, Coping strategies, Body image

Citation: Kaya HE, Altunay İK, Aksu A. Perceived Stress, Stress Coping Strategies, and Body Image Among Facial Dermatoses. *Dermatol Pract Concept*. 2025;15(3):5054. DOI: <https://doi.org/10.5826/dpc.1503a5054>

Accepted: February 26, 2025; **Published:** July 2025

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Funding: None.

Competing Interests: None.

Authorship: All authors have contributed significantly to this publication.

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ABSTRACT **Introduction:** Considering its visible nature, facial dermatosis may result in more prominent psychosocial effects.

Objectives: We aimed to compare quality of life, anxiety, depression, perceived stress, stress coping strategies, and body image in individuals with facial and trunk dermatosis.

Methods: A total of 120 patients (60 with facial dermatosis, 60 with trunk dermatosis) and 60 healthy volunteers were included in the study. Demographic and clinical features were recorded, and participants were evaluated with Dermatology Life Quality Index (DLQI), Hospital Anxiety and Depression Scale (HADS), Perceived Stress Scale (PSS), Stress Coping Attitudes Inventory (SCAI), and Body Image Scale (BIS).

Results: In trunk dermatosis patient group, the DLQI, HADS, and PSS scores were significantly higher, while the BIS scores were significantly lower than in the facial dermatosis group and the controls. Avoidance subscores of the SCAI were significantly higher in the trunk dermatosis group compared to the facial dermatosis group. Acceptance/Cognitive Restructuring subscore of the SCAI was found to be higher in the facial dermatosis than the trunk dermatosis group ($P=0.037$). Linear regression analysis revealed that the most important determinant of DLQI was HADS-Anxiety score ($\beta=0.271$, $P=0.023$) and one of the most important determinant of the PSS score was HADS-Anxiety score ($\beta=0.426$, $P<0.001$).

Conclusion: Patients with trunk dermatosis experienced more stress, anxiety, depression, and distortion of body perception, and the impact on quality of life was more pronounced. This situation was thought to be related to the fact that patients with facial dermatosis used positive coping strategies, while negative strategies were more common in patients with trunk dermatosis.

Introduction

Psychodermatological studies examining complex relationship between the brain and the skin have shown that psychological comorbidity occurs in up to 40% of dermatological patients [1], and its level is comparable to that of other chronic medical diseases [2]. The skin is a social organ with communication, expression, aesthetic, perceptual, and sexual tasks, and changes in appearance cause significant emotional stress and self-perception changes [3]. Dermatitis with visible area involvement like the facial region are thought to cause higher emotional stress, and as a result, their psychosocial effects are more pronounced [4].

Although the psychosocial comorbidities of dermatological diseases are well defined, researches regarding the underlying mechanisms of differences between individuals are not sufficient. In recent years, it has been emphasized that appearance-related psychological stress and individual variations in the adaptation of body perception changes can be explained by coping strategies. Forty percent of dermatological patients stated that they could not cope with their diseases [5], and this rate coincides with the psychological comorbidity rate observed in dermatological patients [2].

Objectives

The chronic and recurrent course of most dermatosis requires patients to be supported for positive adaptation in addition to medical treatment [6]. In this context, it is necessary to define the contributing factors in order to develop approaches that can reduce the perceived stress in individuals and enable them to use effective coping strategies. The primary purpose of this study was to determine the quality of life, anxiety, depression, perceived stress, stress coping strategies, and body image in individuals with facial dermatosis and to compare them with individuals with trunk dermatosis and with controls. In addition, it was aimed to examine the demographic and clinical characteristics that may affect these parameters.

Methods

Study Design

A prospective single center cohort study was designed. Patients admitted to the Dermatologic and Venereal Diseases Outpatient Clinic, whose disease was confirmed by a dermatologist as an isolated facial or isolated trunk dermatosis by a whole-body examination, whose complaints had been ongoing for at least six months, who are over age 18 years old, who agreed to participate in the study, and whose literacy was sufficient were included in the study. Patients who were pregnant or lactating, had a known psychiatric illness or drug use, had an internal disease that could affect the mood,

had a dermatosis that affected both facial and trunk localizations, had anogenital involvement that may affect questionnaires more, and/or had other visible area involvement such as hand, foot, and/or scalp were not included in the study. The control group consisted of healthy volunteers matched for age and sex. A patient assessment form prepared by authors and inquiring about sociodemographic and clinical information was used.

Measurements

Dermatology Quality of Life Index

The Dermatology Quality of Life Index (DLQI) is based on symptoms, emotional state, daily activity, leisure activities, school-work life, personal relationships, and treatment; it consists of 10 questions in the form of a four-point scale [7]. The total score ranges from 0 to 30; the higher the score, the more quality of life is affected. Turkish validity and reliability study was conducted by Öztürkcan et al [8].

Hospital Anxiety and Depression Scale

The Hospital Anxiety and Depression scale (HADS), developed by Zigmond and Snaith [9], consists of two subscales measuring symptoms of anxiety (HADS-A) and depression (HADS-D) through seven statements on each. Higher scores indicate the probability of anxiety disorders and depression [10].

Perceived Stress Scale

The Perceived Stress Scale (PSS), developed by Cohen [11], contains a total of 14 items. The scale is a five-point rating scale, and the score is calculated by reverse scoring for the seven items with positively worded questions. Higher scores indicate greater stress perceptions [12].

Stress Coping Attitudes Inventory

The Stress Coping Attitudes Inventory (SCAI), developed by Özbay [13], evaluates the struggle and effort levels of individuals in various stress situations. Forty-three items are included in the six subscores (Active Planning, Seeking External Help, Turning to Religion, Avoidance/behavioral, Avoidance/biochemical, Acceptance/Cognitive Restructuring). A 5-point rating scale is used, and the increased scores indicate that the related coping strategy is widely used. Each subscore is between 0 and 4 [14].

Body Image Scale

The Body Image Scale (BIS), developed by Secord and Jourand [15], contains 40 items, with the total score ranging from 40 to 200. Lower scores indicate lower body satisfaction [16].

Statistical Analysis

SPSS 20 for Windows program was used for statistical analysis. Descriptive statistics are given as number and percentage for categorical variables, and mean, standard deviation, minimum, maximum, median, and interquartile range for numerical variables. Comparisons of categorical variables in independent groups were performed with chi-square test. Comparisons of numerical variables in independent groups were performed with the Student's *t* test in two groups and the one-way ANOVA test in more than two groups when the normal distribution condition was met, and with the Mann Whitney U test in two groups and the Kruskal Wallis test in more than two groups when the normal distribution condition was not met. The relationships between numerical variables were performed by Pearson correlation test when the parametric test condition was met and Spearman correlation test when the condition was not met. The variables affecting PSS and DLQI scores were evaluated by multiple regression analysis. Process extension was used for mediator and moderator analysis. The statistical alpha significance level was accepted as $P < 0.05$.

Results

A total of 120 patients—60 with facial dermatosis, 60 with trunk dermatosis—and 60 healthy volunteers were included in the study. There was no statistically significant difference between the groups in terms of sociodemographic characteristics (Table 1). There was no statistically significant difference between the patient groups in terms of clinical characteristics (Table 2).

Scores of questionnaires and scales were analyzed in study groups (Table 3). The mean DLQI score in the trunk dermatosis group (12.48 ± 7.90) was significantly higher than in the facial dermatosis group (8.00 ± 6.26) ($P = 0.001$). HADS-A and HADS-D scores were significantly higher in patients with facial and trunk dermatosis compared to the control group; in patients with trunk dermatosis, they were significantly higher compared to those with facial dermatosis. The mean PSS score was 31.55 ± 9.72 in the trunk dermatosis group, 24.88 ± 9.44 in the facial dermatosis group, and 11.28 ± 6.10 in the control group. The PSS score was significantly higher in patients with facial and trunk dermatosis compared to the control group, and it was significantly higher in patients with trunk dermatosis compared to those with facial dermatosis ($P = 0.001$ for each). The mean BIS score was 101.60 ± 30.19 in the trunk dermatosis group, 120.73 ± 41.87 in the facial dermatosis group, and 152.50 ± 29.45 in the control group, and it was significantly lower in the groups of patients with facial and trunk dermatosis compared to the control group ($P = 0.001$ for each) and was significantly lower in patients with trunk dermatosis compared to those

with facial dermatosis ($P = 0.014$). When the SCAI subscores were analyzed, the median Avoidance/Behavioral subscore was significantly higher in the patient groups compared to the control group ($P = 0.001$ for each), and it was significantly higher in patients with trunk dermatosis compared to patients with facial dermatosis ($P = 0.005$). The median Avoidance/Biochemical subscore was significantly higher in the trunk dermatosis group compared to facial dermatosis and the control group ($P = 0.001$ for each); however, there was no statistically significant difference between the scores of facial dermatosis and the control group ($P = 0.086$). The mean Acceptance/Cognitive Restructuring subscore was significantly lower in trunk dermatosis group than in the facial dermatosis and control groups ($P = 0.037$ and $P = 0.031$, respectively). However, there was no statistically significant difference between facial dermatosis and control group scores ($P = 0.998$). Active Planning, Seeking External Help, and Turning to Religion subscores were significantly higher in the patient group compared to the control group, but there was no statistically significant difference between patient groups (Table 4).

The mean BIS score was significantly lower among female patients (90.28 ± 29.65) compared to male patients (132.05 ± 32.93) ($P < 0.001$). Statistically significant, positively moderate correlation between age and BIS scores was found among patients ($r = 0.375$ $P < 0.001$). The mean DLQI score was statistically higher in patients who are working (11.36 ± 7.20) compared to unemployed (8.56 ± 7.57) ($P = 0.046$). There was no statistically significant relationship between all other questionnaires and scale scores and the sociodemographic features evaluated. Statistically significant, a weak positive correlation was found between the DLQI scores and the percentages of disease involved area ($r = 0.230$; $P = 0.012$). The mean DLQI score (11.94 ± 8.13 versus 8.64 ± 6.41), and the mean HADS-A (9.60 ± 5.02 versus 7.85 ± 4.19) score were statistically higher in symptomatic patients compared to asymptomatic patients ($P = 0.016$; $P = 0.040$). The mean Acceptance/Cognitive Restructuring subscore of the SCAI was significantly lower in symptomatic patients (1.93 ± 0.70) compared to asymptomatic ones (2.27 ± 0.65) ($P = 0.008$). There was no statistically significant relationship between all other questionnaires and scale scores and the clinical features evaluated.

Avoidance/Behavioral subscores of SCAI were positively significantly correlated with the HADS-A, HADS-D, and the PSS scores among all patients ($r = 0.240$ $P = 0.008$, $r = 0.337$ $P = 0.001$, and $r = 0.356$ $P = 0.001$, respectively). Acceptance/Cognitive Restructuring subscores of the SCAI were not statistically correlated with the HADS-A, HADS-D, PSS, and the BIS scores, neither for facial nor for trunk dermatosis ($P > 0.005$ for each). The DLQI, HADS-A, HADS-D, and PSS scores were moderately correlated with the BIS scores in a negative direction among all patients ($r = -0.317$ $P = 0.001$,

Table 1. Sociodemographic Characteristics of Subjects.

		Facial Dermatosis (n=60)	Trunk Dermatosis (n=60)	Healthy Controls (n=60)	P
Age Mean±SD (min-max)		40.50±14.51 (18-60)	40.38±13.99 (18-60)	40.61±11.46 (18-60)	0.995*
Gender (n/n)	Female/Male	30 /30	30 /30	30 /30	1.00 ⁺
Marital Status [n (%)]	Single	31 (51.7)	23 (38.3)	31 (51.7)	0.059 ⁺
	Married	26 (43.3)	37 (61.7)	29 (48.3)	
	Divorced	3 (5.0)	0 (0.0)	0 (0.0)	
Educational status [n (%)]	Elementary school	8 (13.3)	16 (26.7)	3 (5.0)	0.060 ⁺
	High School	22 (36.7)	17 (28.3)	21 (35.0)	
	University	27 (45.0)	24 (40.0)	33 (55.0)	
	Doctorate	3 (5.0)	3 (5.0)	3 (5.0)	
Working status [n (%)]	No	27 (45.0)	21 (35.0)	20 (33.3)	0.362 ⁺
	Yes	33 (55.0)	39 (65.0)	40 (66.7)	
Income status [n (%)]	Good	18 (30.0)	15 (25.0)	14 (23.3)	0.189 ⁺
	Average	32 (53.3)	30 (50.0)	40 (66.7)	
	Bad	10 (16.7)	15 (25.0)	6 (10.0)	

*One-way ANOVA ⁺Chi-square test.

Table 2. Clinical Characteristics of Patients.

		Facial Dermatosis (n=60)	Trunk Dermatosis (n=60)	P
Duration of disease (year) Median (IQR)		3 (2-6)	4 (2-8)	0.636*
Percentage of involved area (%) Mean±SD (min-max)		31.33±27.13 (1-100)	31.66±24.67 (5-90)	0.944 ⁺
Involved area n (%)	Central	25 (41.7)	24 (40.0)	0.830 [§]
	Peripheral	16 (26.7)	14 (23.3)	
	Central+peripheral	19 (31.7)	22 (36.7)	
Symptom n (%)	Asymptomatic	33 (55.0)	29 (48.3)	0.465 [§]
	Symptomatic	27 (45.0)	31 (51.7)	
	Pruritus	17 (28.3)	22 (36.7)	0.330 [§]
	Pain	9 (15.0)	14 (23.3)	0.246 [§]
	Sting/burning	9 (15.0)	11 (18.3)	0.810 [§]
Type of disease n (%)	Inflammatory	30 (50.0)	34 (56.7)	0.758 [¶]
	Pigmentation disorder	12 (20.0)	10 (16.7)	
	Tumoral	15 (25.0)	12 (20.0)	
	Other	3 (5.0)	4 (6.7)	

*Mann-Whitney U Test ⁺Student t test [§]Chi-square test [¶]Kruskal Wallis Test. Abbreviations: IQR: interquartile range; SD: standard deviation.

$r = -0.484$ $P = 0.001$, $r = -0.420$ $p = 0.001$, and $r = -0.511$ $P = 0.001$, respectively). Weak and statistically significant correlations were found between the BIS scores and Avoidance/Behavioral and Avoidance/Biochemical subscores of SCAI in negative direction among all patients ($r = -0.284$ $P = 0.02$, $r = -0.195$ $P = 0.033$, respectively).

Parameters related to the PSS score were analyzed by linear regression. Significant positive correlations were found between the PSS score and HADS-A score ($\beta = 0.426$ $p < 0.001$) and HADS-D score ($\beta = 0.289$ $P = 0.001$), and a negative statistically significant correlation was found between the PSS score and BIS score ($\beta = -0.049$ $P = 0.008$) ($R^2_{adj} = 0.580$).

Table 3. DLQI, HADS, PSS, SCAI vs BIS Scores of Study Groups.

	Facial Dermatitis (n = 60)	Trunk Dermatitis (n = 60)	Healthy Controls (n = 60)	P
DLQI Mean \pm SD (min-max)	8.00 \pm 6.26 (0-25)	12.48 \pm 7.90 (0-29)		0.001*
HADS-A Mean \pm SD (min-max)	7.70 \pm 4.31 (0-18)	9.70 \pm 4.83 (0-20)	2.76 \pm 2.31 (0-10)	0.001 ⁺
HADS-D Mean \pm SD (min-max)	7.51 \pm 4.51 (0-16)	10.55 \pm 4.62 (1-20)	2.98 \pm 2.25 (0-9)	0.001 ⁺
PSS Mean \pm SD (min-max)	24.88 \pm 9.44 (5-43)	31.55 \pm 9.72 (7-53)	11.28 \pm 6.10 (3-28)	0.001 ⁺
SCAI				
Active Planning Mean \pm SD (min-max)	2.37 \pm 0.72 (1-3.70)	2.57 \pm 0.66 (1.10-3.90)	1.99 \pm 0.66 (0-3.20)	0.001 ⁺
Seeking external help Mean \pm SD (min-max)	2.14 \pm 0.79 (0.11-3.56)	1.96 \pm 0.91 (0.56-3.67)	1.31 \pm 0.83 (0-3.33)	0.001 ⁺
Turning to religion Mean \pm SD (min-max)	1.79 \pm 1.38 (0-6.00)	2.13-1.01 (0-4.00)	1.00 \pm 1.00 (0-3.33)	0.001 [']
Avoidance/behavioral Median (IQR)	1.78 (1.28-2.28)	2.28 (1.46-2.85)	0.71 (0.28-1.28)	0.001 ^{\$}
Avoidance/biochemical Median (IQR)	0 (0-0.50)	0.50 (0-1.00)	0 (0-0)	0.001 ^{\$}
Acceptance/cognitive restructuring Mean \pm SD (min-max)	2.27 \pm 0.60 (0.86-3.43)	1.95 \pm 0.755 (0.57-3.43)	2.27 \pm 0.74 (0-3.64)	0.016 [']
BIS Mean \pm SD (min-max)	120.73 \pm 41.87 (67.00-191.00)	101.60 \pm 30.19 (45.00-178.00)	152.50 \pm 29.45 (82.00-200.00)	0.001 [']

*Student's t test ⁺One-way ANOVA ^{\$}Kruskal Wallis Test. Abbreviations: DLQI: Dermatology Life Quality Index; BIS: Body Image Scale; HADS-A: Hospital Anxiety and Depression Scale-Anxiety; HADS-D: Hospital Anxiety and Depression Scale-Depression; IQR: interquartile range; PSS: Perceived Stress Scale; SCAI: Stress Coping Attitudes Inventory SD: standard deviation.

Table 4. Statistical Comparison of HADS, PSS, SCAI and BIS scores between study groups.

	Facial Dermatitis/Trunk Dermatitis	Facial Dermatitis/Control Group	Trunk Dermatitis/ Control Group
	P	P	P
HADS-A	0.048*	0.001*	0.001*
HADS-D	0.001*	0.001*	0.001*
PSS	0.001*	0.001*	0.001*
SCAI			
Active Planning	0.256 ⁺	0.007 ⁺	0.001 ⁺
Seeking External Help	0.488 ⁺	0.001 ⁺	0.001 ⁺
Turning to religion	0.293*	0.001*	0.001*
Avoidance/behavioral	0.005 ^{\$}	0.001 ^{\$}	0.001 ^{\$}
Avoidance/biochemical	0.001 ^{\$}	0.086 ^{\$}	0.001 ^{\$}
Acceptance/cognitive restructuring	0.037 ⁺	0.998 ⁺	0.031 ⁺
BIS	0.014*	0.001*	0.001*

*Games-Howell test ⁺Tukey HSD ^{\$}Mann-Whitney U test (Bonferroni correction) Abbreviations: BIS: Body Image Scale; HADS-A: Hospital Anxiety and Depression Scale-Anxiety; HADS-D: Hospital Anxiety and Depression Scale-Depression; PSS: Perceived Stress Scale; SCAI: Stress Coping Attitudes Inventory.

Table 5. Mediator and Moderator Factors Effecting DLQI Scores.

	b	SE	T	P Value
HADS-A→PSS	1.5511	0.1389	11.1710	0.001
HADS-A→DLQI	0.5970	0.1595	3.7429	0.001
PSS→DLQI	-0.3662	0.1815	-2.0178	0.045
PSS*BA→DLQI	0.3564	0.1089	3.2729	0.001

Abbreviations: b: standard coefficient; BA: body area; DLQI: Dermatology Life Quality Index; HADS-A: Hospital Anxiety and Depression Scale-Anxiety; PSS: Perceived Stress Scale; SE: standard error; T: *t*-value.

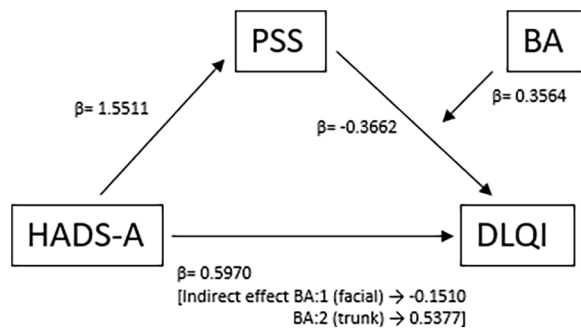


Figure 1. Indirect effect of HADS-A scores on DLQI scores through the PSS scores was mediated by localization of dermatosis.

Parameters related to DLQI score were analyzed by linear regression. A significant positive correlation was found between DLQI and HADS-A score ($\beta=0.271$ $P=0.023$) ($R^2_{adj}=0.426$). It has been found that the indirect effect of HADS-A scores on DLQI scores through the PSS scores was mediated by localization of dermatosis (index=0.5529, $SE=0.151$, 95% CI= [0.2566/0.8563]) (Table 5) (Figure 1), and this mediator effect decreased in patients with facial dermatosis, as shown in Figure 2 ($F[1.118]=124.7921$ $P<0.001$ $R^2=0.4410$).

Discussion

In this study, it was shown that patients with facial dermatosis had lower perceived stress, anxiety, depression scores and higher body perception scores than did patients with trunk dermatosis; accordingly, the decrease in quality of life in facial dermatosis patients was less prominent. It was found that patients with facial dermatosis use cognitive acceptance as a coping strategy, while patients with trunk-located dermatosis use behavioral avoidance more; as a result, the choice of coping strategies plays a more dominant role in the psychopathology of the disease than do sociodemographic and clinical features.

According to the study designed with 150 dermatological patients, the lowest somatization, anxiety, phobia, paranoid thinking, and psychoticism subscores of the Symptom Check List- 90 (SCL-90) were detected in the group of patients with lesions only in visible areas, while the highest scores were

observed in the group of patients with lesions all over the body [17]. Moreover, in the patients who deliberately hide their skin lesions, interpersonal sensitivity, anxiety, hostility, and psychoticism subscores of SCL-90 are significantly higher than in those who do not cover them [17]. In a study in which 96 vitiligo patients were evaluated, the highest DLQI and all of Adjustment to Chronic Skin Diseases (ACS) questionnaire subscores were found in the group of patients with trunk involvement [18]. In another study evaluating 82 patients who had scarring with Derriford Appearance Scale 24 (DAS24) and DLQI, patients with scarring in covered areas experienced higher psychological stress than did patients with scarring in visible areas, and their quality of life was more significantly affected [19]. In a study investigating the effect of visible area involvement on stigma, which included 115 psoriasis patients, visible area involvement had no statistically significant effect on perceived stigma, but in patients who felt the need to hide their lesions, perceived stigma was found to be significantly higher, and the need to hide was identified as the most important factors determining quality of life [20]. In a study in which 247 patients with port-wine stain were evaluated, the highest psychological stress was found in patients with lesions in non-facial locations [21]. The Appearance Research Collaboration (ARC) conducted 12 studies in a series in order to clarify the factors affecting stress and psychological adjustment in patients with deterioration in appearance and compiled them into a book [22]. In one of these studies, conducted on 1,265 participants, the regression analysis demonstrated that a lack of visibility to others was associated with higher levels of distress [22]. These results, in fact, are in line with our study results.

In studies investigating the psychological comorbidities of appearance-distorting diseases, it has been revealed that psychosocial factors play a more important role than do clinical severity, duration of disease, and involvement of visible areas [22, 23]. Accordingly, the most valuable factor that can explain the differences in psychological impact is the adaptation process of patient [23]. Similarly, the rate of psychological comorbidity in dermatological patients, which is estimated to be up to 40% in the literature [2], coincides with the fact that 40% of dermatological patients state that they cannot cope with their disease [5].

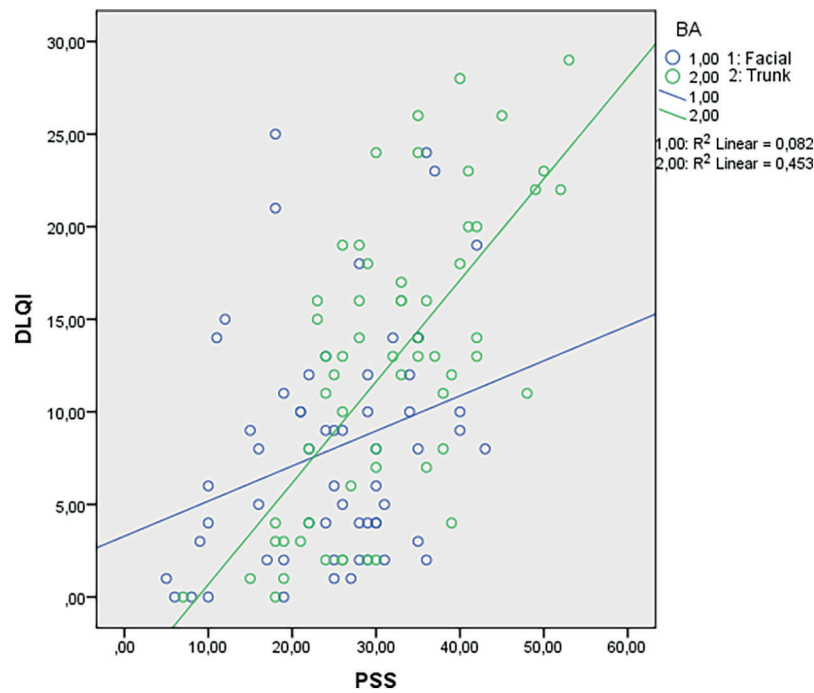


Figure 2. Correlation of the PSS and DLQI scores in patients with facial and trunk dermatosis.

Three coping strategies specific to deterioration in appearance have been identified [24]. The first of these is avoidance. By associating appearance anxiety with social rejection, patients try to balance the stress caused by the distortion of body perception with avoidance. In our study, it was shown that the group of patients with trunk dermatosis used avoidance strategies more than did the group of patients with facial dermatosis. Thompson and Kent [25] stated that the stress associated with deterioration in appearance is caused by the attempt to hide the lesions rather than by the disease itself. Patients with facial dermatosis can achieve this to a certain extent because of localization and develop effective coping strategies, but patients with trunk dermatosis can live their lives by hiding, and this situation is reinforced by the stress created by avoidance. As a result, fewer avoidance strategies are predictive of a more coherent stress response [26].

The second strategy is defined as appearance stabilization and aims to restore balance by changing the presentation, which is distorted. Studies have shown consistent results, especially in patients with facial dermatosis, that cosmetic products used to cover their lesions also positively affect body perception [27, 28]. In a study involving patients with port-wine stain, self-esteem improved after treatment; however, 30% of the patients continued to apply makeup to the previously diseased area and stated that they more confident this way [21]. This study also proves that medical and surgical treatments cannot completely cure the underlying

psychopathology caused by disease, as proposed by Rumsey [29].

The third and most effective strategy is positive rational acceptance. In our study, it was found that cognitive acceptance was used significantly more frequently in the facial dermatosis patients compared to the trunk dermatosis patients. Numerous studies have shown that patients with distortion involving the facial region overcome the problems caused by abnormal appearance by developing strong coping strategies [29-31]. In fact, some studies have shown that these patients have similar stress levels to the control group thanks to the effect of positive coping strategies [30, 31]. For deterioration in appearance in facial areas, psychotherapists basically recommend mirror exercises to patients in the form of examining themselves without prejudice at certain periods within the scope of appearance-specific awareness practices aimed at experiential acceptance with psychoeducation; they state that these exercises are effective in reducing social anxiety [22, 30]. From this point of view, the face is actually one of the most exposed areas of the body in daily life.

In our study, usage of active planning and seeking external help as coping strategies was higher among patient groups than in controls, regardless of localization of disease, suggesting that this may be associated with choosing sample groups from outpatient clinic patients who are searching for treatment.

In our study, while HADS scores were positively correlated with Avoidance/Behavioral subscores, no correlation was found with Acceptance/Cognitive Restructuring

subscores. In a study conducted by Hill [32] on 89 psoriasis patients, HADS-A and HADS-D subscores positively correlated with negative coping strategies; however, no correlation with positive coping strategies was determined. In our study, a statistically significant correlation between BIS scores in a negative direction with the DLQI, PSS, and HADS scores and Avoidance subscores was found. Rogers [33] emphasized that negative body perception increases perceived stress, and individuals with impaired body perception use more negative coping strategies in their studies designed under the concept of body perception flexibility. In another study conducted on 106 skin tumor patients, it was found that avoidance as a negative coping strategy were used more in the group with high body perception concerns also in the group of patients with clinical anxiety and depression [34]. Accordingly in our study, higher negative body perception, DLQI and HADS scores were observed in individuals with trunk dermatosis, and these patients were found to use more negative coping strategies. Furthermore, it has been found that the most important determinant of DLQI scores is HADS-A scores, and the indirect effect of HADS-A scores on DLQI scores through the PSS scores was moderated by localization of dermatosis; this effect also decreased in patients with facial dermatosis.

Limitations

There are some limitations of our study. The fact that patient groups consisted of individuals who attended the outpatient clinic and who were actively seeking help for their dermatological problems. Although the correlations between questionnaires and scales were evaluated, the cross-sectional structure of the study does not allow us to comment on causality. In addition, factors that may affect the choice of coping strategies, such as social support, personality traits, and social skills, were not included in the evaluation scope of the study.

Conclusion

The psychopathology of dermatological diseases is a complex and dynamic process involving many psychosocial components in interaction with each other. Psychological comorbidities can continue to exist even when the dermatosis itself disappears and can significantly affect the quality of life of patients. Due to the chronic and recurrent nature of most dermatosis, risk factors should be defined in order to develop multidisciplinary approaches that can reduce perceived stress and enable dermatological patients to use effective coping strategies.

Ethical Approval: Reviewed and approved by the University of Health Sciences, Şişli Hamidiye Etfal Training and Research Hospital local ethics committee. Approval number: 3237. The procedures used in this study adhere to the tenets of the Declaration of Helsinki.

Ethics Statement: Consent to Participate: Informed consent was obtained from all individual participants included in the study.

Consent to Publish: The participants in this manuscript have given their written informed consent to the publication of their case details.

Data Availability Statement: The data that support the findings of this study are available from the corresponding author upon reasonable request.

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